

1

```
cout<<3/10;           - we will see the number 0
cout<<3.0/10;         - we will see the number 0,3
cout<<(double)3/10;   - also 0,3
```

2

```
int n=65;
cout<<(char)n;        - we will see the letter A

int a='A';
cout<<a;              - we will see the number 65
```

3

```
double x;

cout<<" Enter the number "; cin>>x;
cout<<" The number given is "<<x;
```

Input	Result	Input	Result	Input	Result
3	3	3.14	3.14	3,14	3

Input	Result	Input	Result	Input	Result
3a	3	3e	0	abc	0

Input	Result	Input	Result	Input	Result
a3.14	0	3e4	30000	3e-2	0.03

4

```
double x, y, z;
```

```
x=5.0;
y=4.0*x-25.8; //      y = -5.8
z=-5.8;
```

```
cout<<" Question: Whether z=y "<<endl;
if (z-y==0) cout<<" z = y (equal)";
else cout<<" z and y are NOT equal!!";
```

We will see caption:

```
z and y are NOT equal!!
```

```

double x, y, z;

x=5.0;
y=4.0*x-25.8; //      y = -5.8
z=-5.8;

cout<<" Question: Whether z-y<0.0000001? ";
if (fabs(z-y)<0.000001) cout<<" z = y (equal)";
else cout<<" z and y are NOT equal!!";

```

We will see caption:

```
z = y (equal)
```

( **fabs** calculates absolute value on floating point numbers)

---

5

The program selects natural numbers from the text file if they are or are not separated by commas.

```

#include <iostream>
#include <cstring>
#include <fstream>
#include <sstream>
#include <algorithm>
using namespace std;

main()
{
    fstream p;
    stringstream rum;
    string linia;
    int a;
    p.open("numbers.txt",ios::in);

    // reading the text line from the file
    getline(p, linia);
    replace(linia.begin(), linia.end(), ',', ' ');
    rum<<linia;

    while(rum.good())
    {
        rum>>a;
        cout<<a<<endl;
    }
    cout<<endl<<endl;
    rum.clear(); um.sync();
    p.close();

    return 0;
}

```

File content „numbers.txt”

1, 2 3, 4, 5 6, 7

Result:

```

-----
1
2
3
4
5
6
7

```

The program performs the addition of two integers with the number of digits up to 200!

*Example:* 12345678987654321 + 98765432123456789 = 111111111111111110

```
#include <iostream>
#include <iomanip>
#include <fstream>
#include <cstring>
using namespace std;
main()
{
int k,ile=0,cyf1,cyf2,cyf3, pamiec, dl1,dl2;
char s1[200], s2[200],l1[200], l2[200], l3[200];
system("CLS");

// Enter 2 numbers into arrays s1 and s2 with a stream cin
cout<<"  Firs number:      "; cin>>s1; cout<<endl;
cout<<"  Second number:    "; cin>>s2; cout<<endl;

// Calculation of the number of digits
dl1=strlen(s1); dl2=strlen(s2);

// Finding the maximum from the length
if (dl1>dl2) ile=dl1; else ile=dl2;

// Filling the arrays with digits of both numbers (from the end)
for (k=0;k<dl1;k++) l1[k]=s1[dl1-1-k];
for (k=0;k<dl2;k++) l2[k]=s2[dl2-1-k];

// Supplementation of the arrays with zeroes + one additional zero
for (k=dl1;k<=ile;k++) l1[k]='0';
for (k=dl2;k<=ile;k++) l2[k]='0';

// Filling in with zeros of the arrays for the result
for (k=0;k<=ile;k++) l3[k]='0';

// ADDITION in writing
pamiec=0;
for (k=0; k<=ile; k++)
{
cyf1=l1[k]-48; cyf2=l2[k]-48; cyf3=cyf1+cyf2+pamiec;
if (cyf3<=9 )
{l3[k]=cyf3+48; pamiec=0; }
else
{ l3[k]=(cyf3%10)+48; pamiec=(cyf3-cyf3%10)/10; }
}

// Final prints of both numbers and their totals
cout<<endl<<"--- SUMA -----"<<endl<<endl;
cout<<"suma = ";
if (l3[ile]!='0') cout<<l3[ile];
for (k=ile-1;k>=0;k--) cout<<l3[k]; cout<<endl;

system("PAUSE");
return 0;
}
```